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(71) Applicant (*for all designated States except US*): **EVOTEC NEUROSCIENCES GMBH** [DE/DE]; Schnackenburgallee 114, 22525 Hamburg (DE).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **HIPFEL, Rainer** [DE/DE]; Albert-Fränkel-Str. 6, 69126 Heidelberg (DE). **VON DER KAMMER, Heinz** [DE/DE]; Verbindungsstr. 6d, 22607 Hamburg (DE). **POHLNER, Johannes** [DE/DE]; Quittenweg 11, 22175 Hamburg (DE).

(74) Agents: **MEYERS, Hans-Wilhelm et al.**; P.O. Box 10 22 41, 50462 Cologne (DE).

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(54) Title: DIAGNOSTIC AND THERAPEUTIC USE OF THE VOLTAGE-GATED ION CHANNEL SCN2A FOR NEURODEGENERATIVE DISEASES

(57) Abstract: The present invention discloses the differential expression of the gene coding for the voltage-gated ion channel SCN2A in specific brain regions of Alzheimer's disease patients. Based on this finding, this invention provides a method for diagnosing or prognosticating a neurodegenerative disease, in particular Alzheimer's disease, in a subject, or for determining whether a subject is at increased risk of developing such a disease. Furthermore, this invention provides therapeutic and prophylactic methods for treating or preventing Alzheimer's disease and related neurodegenerative disorders using the voltage-gated ion channel gene SCN2A and its corresponding gene products. A method of screening for modulating agents of neurodegenerative diseases is also disclosed.

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